

Application No. 10/800,989
Docket No. 2003-0586.01
(58814.US/4665.0)

REMARKS

Claims 1-16 are in the application. Claim 1 is amended to more clearly and distinctly claim the invention. Support for the amendment to claim 1 can be found in the specification on page 8, lines 28-31 and in FIGS. 4-5 and 8. The amendment to claim 1 is not made for the purposes of patentability or to define over the cited references. No new matter is added to the application by the amendment.

In the Office Action, the restriction requirement was made final and claims 11-16 were withdrawn from consideration. Claims 1, 3 and 5-9 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,434,607 to Keefe. Claims 2, 4, and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over the '607 patent in view of U.S. Patent No. 6,024,440 to Murthy et al. The rejections are respectfully traversed.

An important aspect of the disclosure is the use a nozzle plate structure instead of an encapsulant material to cover and protect lead beams on a flexible circuit and the bond pads on a semiconductor substrate without the use of an encapsulant material. As is shown and described in the specification, lead beams extend in a window area of a flexible circuit to bond pads on a semiconductor substrate. These lead beams and bond pads must be protected from contact with ink and other fluids to protect these structures from corrosion. Accordingly, an expanded nozzle plate structure is used instead of an encapsulant material to cover and protect both the lead beams and contact pads from contact with ink and other fluids.

Contrary to the examiner's assertions, the primary reference (the '607) patent fails to teach, suggest or disclose all of the elements of claim 1 or claims 2-10 dependent therefrom. The '607 patent teaches that the substrate electrodes 54 connected to conductive traces 30 are exposed in the opening 36 as is clearly shown in FIGS. 5, 6, and 8 and described in column 4, lines 33-36 and column 7, lines 23-26 of the '607 patent. No portion of the nozzle member 44 or barrier layer 50 is taught, suggested, or disclosed in the '607 patent as overlapping both the electrodes 54 and traces 30 connected to the electrodes 54. Accordingly, the '607 patent fails to provide all of the elements of claim 1.

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The '607 patent also fails to teach, suggest, or disclose a nozzle plate structure comprising a nozzle plate and a protection plate circumscribing the nozzle plate as set forth in claim 3-4, the second length of the nozzle plate structure being greater than the first length of the chip as set forth in claim 6, the protection plate overlapping the leads, bond pads, and chip as set forth in claim 7. FIGS. 5 and 8 of the '607 patent show that the substrate 46 has a length greater than the length of the nozzle plate 44.

In view of the manifest deficiencies of the '607 patent to provide all of the elements of the claimed invention, the rejection of claims 1-10 is wholly untenable and should be withdrawn.

In the rejection of claims 2, 4, and 10, the '607 patent is combined with the '440 patent for the purpose of providing the polyimide film limitation of claim 2. However, the '440 patent also fails to cure the manifest deficiencies noted above with respect to the limitations of claims 1, 3-4, 6 and 7. Specifically, the '440 patent also fails to suggest or disclose a nozzle member covering the tab bonds on the semiconductor substrate. Accordingly, the combination of references fails to provide all of the elements of the claimed invention. Reconsideration and withdrawal of the §103(a) rejection of claims 2, 4 and 10 are respectfully requested.

Applicants do not intend to surrender any range of equivalents under the Doctrine of Equivalents in regard to any claim limitation that appears in the final claims in any patent that may issue from this or any related application. Applicants expressly reserve the right to resort to the Doctrine of Equivalents for all limitations in regard to any future assertion of infringement of any claim, whether the limitation was present in an original claim, added by amendment to a claim, or referenced in any argument to distinguish any claim from any prior art. All claims in any patent issued from this or any related application represent a statutorily presumed valid and patentable combination of structure and/or steps, and it is this combination which is presumed to patentably distinguish the claims from the prior art, not any particular limitation of any claim.

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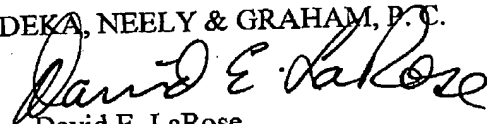
In the event this response is not timely filed, Applicants hereby petition for the appropriate extension of time and request that the fee for the extension along with any other fees which may be due with respect to this paper be charged to our Deposit Account No. 12-2355.

If the Examiner identifies further issues which may be resolved by telephone, the Examiner is kindly invited to contact the undersigned at (865) 546-4305.

Respectfully submitted,

LUEDEKA, NEELY & GRAHAM, P.C.

By:

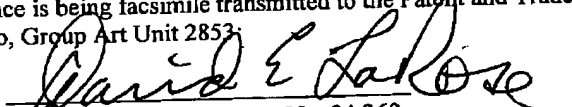

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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office at 571-273-8300, ATTN: Examiner AnH. Do, Group Art Unit 2853;

on August 12, 2005


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